

CLAIMS

- 1 1. Apparatus comprising
 - 2 a connector configured for insertion and removal of a
 - 3 digital device, the connector having contacts arranged to make
 - 4 electrical connection to conductors on the digital device while the
 - 5 digital device is inserted in the connector, and
 - 6 a first electromagnetic coupler connected to at least one of
 - 7 the contacts of the connector, the electromagnetic coupler being
 - 8 configured for electromagnetic coupling at an interface to a second
 - 9 electromagnetic coupler that is connected to a communication bus.
- 1 2. The apparatus of claim 1 in which the connector comprises
2 a socket.
- 1 3. The apparatus of claim 2 in which the socket is configured
2 to receive a memory card.
- 1 4. The apparatus of claim 1 in which the contacts comprise
2 spring contacts.
- 1 5. The apparatus of claim 1 in which the contacts are
2 configured to carry signals.
- 1 6. The apparatus of claim 1 in which the digital device
2 comprises a memory card.

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- 1 7. The apparatus of claim 1 in which the digital device
2 comprises an I/O card.
- 1 8. The apparatus of claim 1 in which the connector comprises
2 a rigid coupling element, and the first electromagnetic coupler is
3 formed on a surface of the rigid coupling element.
- 1 9. The apparatus of claim 8 in which the connector comprises
2 a socket body having a slot configured to receive the digital device
3 and a cavity to receive the rigid coupling element.
- 1 10. The apparatus of claim 9 in which the connector comprises
2 a spacer that defines a fixed distance between a wall of the cavity
3 and the rigid coupling element.
- 1 11. The apparatus of claim 1 also including a viscous liquid on
2 the first electromagnetic coupler.
- 1 12. The apparatus of claim 8 in which the contacts of the
2 connector are soldered to pads on a surface of the rigid coupling
3 element, and the pads are electrically connected to the first
4 electromagnetic coupler by vias in the rigid coupling element.
- 1 13. The apparatus of claim 8 in which the contacts of the
2 connector are soldered to through holes in the rigid coupling
3 element.
- 1 14. The apparatus of claim 8 in which the rigid coupling
2 element comprises a core and metalization layers on two faces of
3 the core.
- 1 15. The apparatus of claim 14 in which the rigid coupling
2 element also includes solder masks on the metalization layers.

1 16. A system comprising
2 a circuit board,
3 a bus arranged on the circuit board,
4 electromagnetic couplers defined at locations along the bus,
5 sockets having electromagnetic couplers and contacts for
6 connection to contact pads of device boards, the sockets being
7 mounted to define interfaces across which electromagnetic
8 coupling of signals can occur between the electromagnetic
9 couplers defined along the bus and the electromagnetic couplers on
10 the sockets.

1 17. The system of claim 16 in which the sockets are mounted
2 on the board by pins.

1 18. The system of claim 16 in which each of the sockets has an
2 electromagnetic coupler for each of a set of signals carried by the
3 contacts of the sockets.

1 19. The system of claim 16 in which each of at least some of
2 the electromagnetic couplers have a zig-zag configuration.

1 20. The system of claim 16 also including a processor mounted
2 on the board and coupled to the bus.

1 21. A system comprising
2 a circuit board,
3 a bus arranged on the circuit board,

- 4 electromagnetic couplers defined at locations along the bus,
- 5 sockets having electromagnetic couplers and contacts for
- 6 connection to contact pads of device boards, the sockets being
- 7 mounted to define interfaces across which electromagnetic
- 8 coupling of signals can occur between the electromagnetic
- 9 couplers defined along the bus and the electromagnetic couplers on
- 10 the sockets, and
- 11 device boards mounted in the sockets.
- 1 22. The system of claim 21 in which the device boards include
- 2 memory devices or I/O devices.
- 1 23. A method comprising
- 2 conducting digital signals along a bus,
- 3 at locations along the bus, electromagnetically coupling the
- 4 digital signals to sockets,
- 5 within the sockets conducting the digital signals to
- 6 contacts, and
- 7 conducting the signals from the contacts to boards plugged
- 8 into the sockets.
- 1 24. The method of claim 23 in which the signals comprise
- 2 memory address and data signals.
- 1 25. A method comprising

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- 2 mounting sockets on a circuit board at locations of
3 electromagnetic bus couplers, and
- 4 populating the circuit board with components that include a
5 processor coupled to a bus served by the electromagnetic bus
6 couplers.
- 1 26. The method of claim 25 also including inserting digital
2 devices into the sockets.

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